

Operator Training

Mechanical Line Leak Detector

D H E C



PROMOTE



PROTECT



PROSPER

South Carolina Department of Health
and Environmental Control

Pressurized Lines

Release detection regulations for piping state that there must be a method to look for the “big” leak (3.0 gallons per hour continuously) as well as the “little” leak (either 0.2 gallons per hour monthly or 0.1 gallons per hour yearly). A mechanical line leak detector can satisfy the requirement only for the big leak. You will have an additional method of line leak detection to look for the little leak.

Pressurized Lines

There are several ways to look for the big leak as well as the little leak:

- Big Leak = 3.0 gallons per hour continuously

 - Mechanical Line Leak Detector (LLD)

 - Electronic Line Leak Detector (ELD)

- Little Leak = 0.2 gallons per hour monthly or 0.1 gallons per hour annually

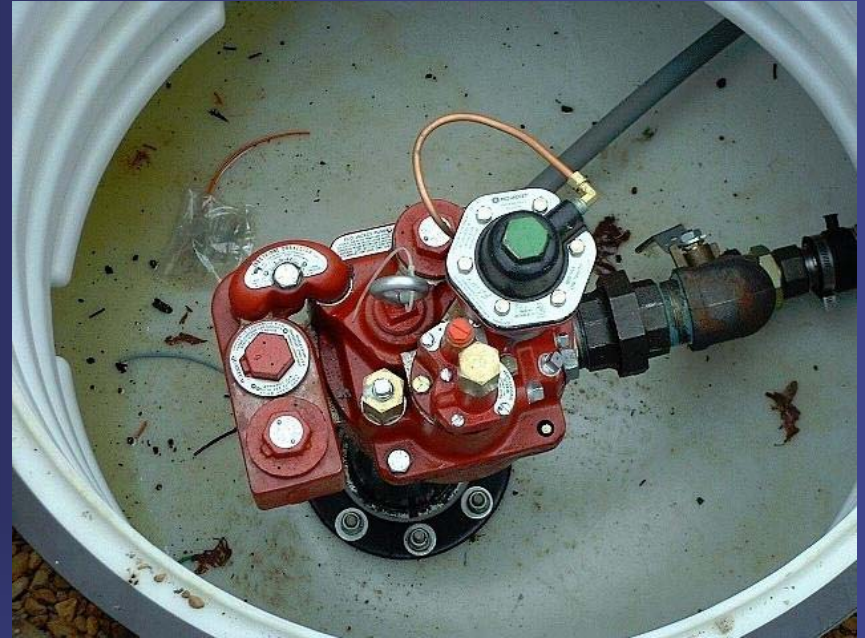
 - Monthly Statistical Inventory Reconciliation (0.2 gph monthly)

 - Monthly Interstitial Monitoring (0.2 gph monthly)

 - Monthly monitoring with an Electronic Line Leak Detector (0.2 gph or 0.1 gph)

 - Annual Line Tightness Test (0.1 gph yearly)

Mechanical Line Leak Detectors



A mechanical line leak detector is located on the submersible turbine pump head in a sump or pit above the tank. The leak detector automatically tests for piping leaks each time the pump is turned on by monitoring how long it takes for the line to reach operating pressure. If a leak is detected, the leak detector must shut off the flow of fuel, restrict the flow of fuel, or trigger an alarm. Most mechanical line leak detectors restrict flow.

Function Check

Piping System Report

Customer:

Customer:

Phone:

Phone:

Date: September 29, 2008

County:

Technician:

Facility ID:

Pressurized Piping

Product	Regular	Plus	Supreme
Approximate Length	75'	75'	75'
Pump Manufacturer	Red Jacket	Red Jacket	Red Jacket
Isolation Mechanism (Pump)	Ball Valve	Ball Valve	Ball Valve
Isolation Mechanism (Dispenser)	Isolation Plug	Isolation Plug	Isolation Plug
Test Pressure (1.5 Times Working Pressure)	45 PSI	45 PSI	45 PSI
Last Product Dispensed	1530	1530	1530
Time Started	1600	1600	1600
Time Completed	1630	1630	1630
Total Test Time (30 Minute Min)	30 Min	30 Min	30 Min
Initial Cylinder Level(ICL)	0.050	0.061	0.047
Final Cylinder Level(FCL)	0.048	0.060	0.045
Leak Volume	-0.002	-0.001	-0.002
Conclusion (Pass or Fail)	PASS	PASS	PASS

Hasstech Acurite Pipeline Tester

Leak Detector

Product	Regular	Plus	Supreme
Leak Detector Manufacturer	Red Jacket	Red Jacket	Red Jacket
Model/Type	FXIV	XL	FXIV
Serial #	41100 0154	Unknown	6235
Conclusion (Pass or Fail)	PASS	PASS	PASS

All mechanical line leak detectors require that a third-party annual leak detector function check be performed every 365 days. That means if the check was performed on September 1, 2009, the next check is due on or before September 1, 2010. Keep the results of this check with other release detection records for at least one year or until the next function check is performed.

Function Check

If the leak detector function check fails, notify the Department immediately. The leak detector should be replaced and the new one should be function checked. This information should be kept along with all other required release detection records as well.

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